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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,164	09/28/2001	Jin-Meng Ho	TI-32159	4942
23494	7590	10/12/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			ABELSON, RONALD B	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/967,164	<b>Applicant(s)</b> HO ET AL.	
	<b>Examiner</b> Ronald Abelson	<b>Art Unit</b> 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003 and 28 September 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 28-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9, 13 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 4-6, 8, 10-12, 14-20 and 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/8/03</u> . | 6) <input type="checkbox"/> Other: _____  |

1. Election/Restriction

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-27, drawn to a method of providing contention free transmission during a contention period, class 370 subclass 445-449.

II. Claims 28-37, drawn to the details of a centralized controller class 379, subclass 265.02.

3. The inventions are distinct, each from the other because: invention I pertains to providing an algorithm for an improved method of providing communication over a shared medium while invention II is the designing an improved centralized controller.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Mr. Abdul Zindani on September 16, 2005, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 28-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must

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be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Specification***

9. The disclosure is objected to because of the following informalities:

On page 1 line 14, the serial number must be stated.

On page 1 lines 14 and 15, "attorney docket number TI-32700" must be removed.

On page 1 line 16, the serial number must be stated.

On page 1 lines 17, "attorney docket number TI-32377" must be removed.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

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invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3, 7, 9, 13, and 21-24 are rejected under 35

U.S.C. 102(e) as being anticipated by Fogle (US 6,813,260).

Regarding claim 1, Fogle teaches a method for providing contention free transmission during a contention period in a shared communications medium (fig. 1, interaction of contention-free and contention based arbitration, implement contention-free arbitration, col. 1 lines 45-58).

Fogle teaches capturing the shared communications medium (fig. 1, PCF gains access and takes control of the medium, col. 1 lines 50-52).

Fogle teaches permitting a recipient to transmit (PCF provides communication medium access to stations, col. 1 lines 29-32).

Fogle teaches recapturing the shared communications medium after the recipient transmits (wireless medium is idle for the PIFS period, the PCF takes control of the medium, col. 1 lines 50-52, fig. 5 box 204, if the medium is not idle, the station may wait for the next PIFS period, if the medium is idle, the station may take control of the medium, col. 8 lines 8-27).

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Note, the passages above show that if the wireless medium is idle for the designated period, the PCF may capture/recapture the wireless medium.

Regarding claim 2, waiting for the shared communications medium to become idle prior to capturing the shared communications medium (col. 1 lines 50-52).

Regarding claim 3, the capturing step comprises a hybrid controller / PCF transmitting a frame / polling (col. 1 lines 46-55). Note, the examiner corresponds the applicant's hybrid controller with the PCF of the reference and the applicant's frame with the reference's polling. The examiner maintains that polling is part of the capturing process since the PCF compatible stations would not know that the medium has captured the medium without being polled.

Regarding claim 7, the frame is a control frame (polling, col. 1 lines 29-32, 46-55). The examiner corresponds the applicant's control frame with the reference's polling since the reference "controls" access the communication medium based upon the results of the polling.

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Regarding claim 9, repeating steps of claim 1 after the shared communications medium has been idle for a PIFS period (if the wireless medium is idle for the PIFS period, PCF gains access, col. 1 lines 45-52, fig. 5 box 204, if the medium is not idle, the station may wait for the next PIFS period, if the medium is idle, the station may take control of the medium, col. 8 lines 8-27). Regarding repeating the steps, as shown in the passage above, the PCF is continually monitoring the medium for an idle period.

Regarding claim 13, the permitting step comprises: transmitting a frame by the recipient / wireless stations (results of the polling, col. 1 lines 29-32, wireless station must make itself known to the PCF, col. 1 lines 32-36) and transmitting a frame by a hybrid controller / PCF (PCF polls registered wireless stations (col. 1 lines 29-32). Note, the results of the polling are based upon the wireless stations transmitting information to the PCF.

Regarding claim 21, a station becomes a recipient /wireless station by sending a control frame to a hybrid controller / PCF



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(wireless station must make itself known to the PCF, col. 1 lines 32-36).

Regarding claim 22, upon receipt of the control frame from the station, the hybrid controller / PCF places the station in a list of recipients (for a wireless station to be included in the PCF polling sequence, wireless station must make itself known to the PCF, col. 1 lines 32-36).

Regarding claim 23, releasing the communications medium after the contention-free transmission ends (fig. 1, if wireless medium idle, PCF gains access to the medium, col. 1 lines 45-52). Note, the releasing of the communications medium is shown since the PCF may capture/recapture the communications medium after it has been idle for the PCF period.

Regarding claim 24, transmitting frames using contention access / contention based after the contention-free transmission ends (col. 2 lines 46-55).

***Allowable Subject Matter***

12. Claims 4-6, 8, 10-12, 14-20, and 25-27 are objected to as being dependent upon a rejected base claim, but would be

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allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*RA*  
Ronald Abelson  
Examiner  
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*Ron Abelson*